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ABSTRACT

Four-wave, five-year longitudinal panel data are used to assess selected antecedents and consequences of participation in student activities. Path analysis reveals that the "early" or freshman year educational expectations of high school students are a critical determinant of participation. Measured intelligence is also a determinant of senior year participation for males and females but only for females during the sophomore year. Parental achievement socialization practices exert a direct effect on participation but only for males. Both educational attainment subsequent to the completion of high school and educational expectation level during the senior year are directly dependent upon participation. Sex differences in the determinants of participation lead to inferences regarding the meaning of participation for males and for females. Tables and references are included. (Author)

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PARTICIPATION IN STUDENT ACTIVITIES AS A VARIABLE IN THE EDUCATIONAL ATTAINMENT AND EXPECTATION PROCESS

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INTRODUCTION[1]

Student (or extracurricular) activities have a long and enduring heritage in American secondary education. As with most social phenomena, however, participation in student activities is not distributed randomly among the population in question. Rather, as Hollingshead (1949) established more than two decades ago, participation in the activities of the high school varies systematically with specific social characteristics of the student himself.[2]

To a degree, the persistence of student activities in American secondary education can be attributed to the case made by partisans which usually rests upon the two-fold assertion that: (1) participation "rounds out" a student, i.e., it makes him a better citizen, and (2) participation provides experiences which facilitate educational and occupational success subsequent to the completion of high school.

This paper addresses itself to the issues identified in the first two paragraphs; namely, (1) what are some of the variables on which participation depends?, i.e., the determinants of participation; and (2) does participation influence at least the educational component of the career cycle, specifically, the level of educational expectation while still in the high school and the level of education actually pursued subsequent to the completion of high school, i.e., the consequences of participation.

STUDENT ACTIVITIES IN PERSPECTIVE

In the history of secondary education, student activities can be traced as far back as the Colonial period when informal athletics, student newspapers, and clubs were affiliated with public and private schools. Before the twentieth century, extracurricular activities were not considered to be an essential part of the school program. By the late 1920's, however, such activities

had proliferated and become more formally integrated into the secondary education program. In large part, according to Spring (1972), the prominence of extracurricular activities during (and following) the twenties stems from their contribution to the resolution of a dilemma which confronted American education in the early nineteen hundreds: how to school and differentiate youth into a labor force prior to graduation according to ability and vocational goals without incurring the loss of a sense of unity and interdependence among the students while they were being processed and differentiated for the labor force. The resolution of this dilemma, writes Spring, lay in the formation of the comprehensive high school and in the development of a program of extracurricular activities:

> The basic principle of the comprehensive high school was the maintenance of a differentiated program within one instutution with unity and socialization being achieved through extracurricular activities. Since unity was not inherent within a differentiated educational program, it had to be imposed. The methods paralleled markedly the factory activities of clubs, outings, assemblies, magazines, and the other means used to create corporate spirit in industrial firms. In the American high school it was clubs, athletics, assemblies, student government, and school newspapers. These, in fact, became the symbols of what a high school in the United States was all about (Spring, 1972: 83-84).

Since the depression era of the thirties, extracurricular activities have been further integrated into the structure of American secondary education. Bent, Kronenberg, and Boardman (1970), for example, observe that over the last several decades:

> School activities have become a part of the school curriculum rather than something extra. Thus the term"extracurricular activities"

> is somewhat inappropriate. Student activities are part of the school curriculum which is voluntary, approved, and sponsored by the school, but which carries no academic credit. Student activities may include athletics, parties and dances, dramatics, speech, publications, clubs, and student government. All of these diverse activities share one common goal: they contribute to the realization of the purposes of the school. To the extent they do, they may properly be thought of as part of the school curriculum.

More recently, however, the position of student activities in secondary education has become somewhat precarious. Students themselves not only have questioned their relevance but have criticized certain activities such as student government and the school newspaper as being little more than facades through which the administration attempts to impose its definition and control of "reality" upon the student body. And, with the increasing resistance of citizens to support through taxes on real property the ever rising costs of education, student activities have been falling victim to the axe of fiscal austerity -- albeit often not without resistance and counter-pressure. Witness, for example, the public opposition to the ill-fated proposal of the superintendent of the Philadelphia public schools to eliminate extracurricular activities, most notably, varsity football, as an austerity measure.[3]

THE PROBLEM

Although we are able to trace the social history of student activities in American secondary education for almost two centuries, we find that the systematic and rigorous analysis of student activities as a social phenomenon dates back no more than two or three decades. Among the issues of import

which such analyses should address are: (1) what are the determinants of participation, and (2) what are the consequences of participation.

With respect to the determinants of participation, we suggest that activities are likely to attract students who are already disposed to "success" or "achievement" at least as these criteria are defined in American secondary education. We regard this assertion as plausible since activities are widely seen as providing opportunities to develop achievement skills, to compile a record of participation which will enhance the chances of college admission, to associate with other achievement-oriented students, and to demonstrate actively for self, peers, parents, teachers, and others successful abilities and performances. In this vein, Polk has written that participation in activities often is part of a more general success syndrome:

> Involvement in the generalized success syndrome of the school may be thought of as consisting of a series of "side bets" which serve to "lock in" the involvement of the student. While at least adequate performance may constitute a minimum ingredient of commitment, the "side bets" that a student makes serve an important role in reinforcing his commitment to success within the system. Participation in student activities provides one of the clearest examples of this kind of bet. Once he becomes involved in activities, the adolescent adds a link to the chain locking him into the system. This involvement in activities gives him an increased stake in academic performance, since in all probability continued engagement in activities will depend to some degree on continued academic success (Polk, 1966).

If activities in fact serve as a potential arena for success, it is reason-

able to expect participation to be positively associated with several antecedents which have been shown in past research to be associated with academic achievement and career intentions; to wit: socio-economic status, measured intellignece, parental achievement socialization practices, parental educational encouragement, and career educational expectations (for a general overview of this literature, see Kerckhoff, 1972, Sewell and Shah, 1967, and Rehberg, Sinclair, and Schafer, 1970).

Educational expectations, especially "early" expectations, that is, those held prior to entry into an extracurricular activity, should relate particularly strongly to participation to the extent that participation is viewed by the student as being instrumental to academic success and entry into college. Relationships of moderate strength between participation and socio-economic status have been reported in previous studies, of course, for example, in those of Hollingshead (1949) and Schafer and Armer (1968). Little definitive data exist, however, regarding the association of participation with measured intelligence, parental achievement socialization practices, or parental educational stress or encouragement.

As to the consequences of participation, we are particularly interested in the relationship between participation and educational expectations/attainment. Given the variables we have selected as the determinants of participation, a relationship between educational expectations or attainment and participation is highly probable. Both expectations and attainment and participation, we submit, share many of those determinants in common. What is problematic, however, is the existence of a residual relationship between expectations/attainment and participation once the influences of those determinants have been partialled out. The anticipation of an independent or net effect of participa-

tion on expectations/attainment, however, is not without precedent in the literature. Schafer and Armer (1968) for example, have reported that varsity athletes received superior grades and dropped-out proportionately less than did comparable non-athletes. Coleman's data from The Adolescent Society revealed that top athletes had grade-point averages above those of the general student body in six of his ten sample schools (Rehberg and Schafer, 1968). And, both Rehberg and Schafer (1968) and Pugh and Sprietzer (1972) have reported that a larger percentage of varsity athletes expect to enroll in college by the end of the senior year than do comparable non-athletes while Bend (1968) found that athletes are more likely than non-athletes to attend and graduate from college than are non-athletes and to attain higher status occupations as well. Finally, while Spady has reported that athletes aspire to college disproportionately more than non-athletes only when they have also participated in other activities as well, he has also reported a marked influence of general participation on college enrollment and persistence:

> Not only is inactivity associated with much lower aspiration rates, it clearly implies a much lower chance of attaining more than one year of college even among those who desire to go (Spady, 1971).

Such a finding is consistent with that reported by Snyder (1962) showing that participation in school organizations and activities is positively associated with college attendance, college graduation, and occupational status some five years after high school commencement even when measured intelligence and family background were controlled.

In summary, then, we seek to explore in this paper: (1) the relationship between participation and several success or achievement disposing background variables, and (2) the relationship between measures of those achievement variables themselves and participation net of the effects of the background variables.

METHODS AND PROCEDURE

Data for the analysis are from four waves of a five-wave, seven-year longitudinal panel survey of the slightly less than 3000 member cohort of the class of 1970 from seven urban and suburban, public and parochial school systems in the southern tier of New York.

In April and May of 1967, all members of the cohort who were present in school were administered a one-hour, fifteen-page "Career Preference Survey" questionnaire. Useable instruments were secured from about 95 percent of all students enrolled, that is, from 1455 males and 1336 females. Again during the last two months of the sophomore year, 1968, and the senior year, 1970, multi-page instruments were administered. In October of 1970, the first of a five-stage mail follow-up survey of the cohort was begun. By February of 1971, the five mailings had yielded replies from 88 percent of all students who had participated in the 1967, freshman-year, survey.

As noted in the first paragraph above, this paper employs responses from that segment of the total sample which was present, as it were, for <u>each and all</u> of the four measurements. For males, this sub-sample numbers 877 or 60 percent of the initial freshman panel. For females, the sub-sample is 845, or 63 percent of the initial freshman panel. These sub-samples differ from the initial complete freshman panel in that those respondents who were present for all four surveys:

1. Are from slightly higher status backgrounds than the freshman panel. On the 11-high to 77-low Hollingshead Two Factor Index of Social Position status scale (1957), the mean status level of the four-wave sub-sample is 39.47 (males) and 39.96 (females) <u>vis a vis</u> 40.34 and 40.37, respectively, for the complete freshman panel.

2. Are slightly more intelligent. Mean IQ for the four-wave subsample is 111.51 for males and 110.79 for females. Respective means for the complete freshman panel are 109.80 and 109.93.
3. Had slightly higher educational expectations as freshman than did the complete freshman panel. On the Hollingshead seven-level scale of educational attainment, where a score of 1 is "graduate or professional education", 2 is "four years of college", 3 is "two years of college", and 4 is "graduate from high school", the mean expectation level for the four-wave males was 2.40 and for females 2.57. Respective means for the freshman panel were 2.56 and 2.69.

In essence, then, the hypothetical "population" to which the findings of this paper may be generalized are those students who complete the four-year life cycle of the secondary school.

Variables used in the analysis include:

X_1 and X_2, or actual post-high school educational behavior (EE_3) and senior year level of educational expectation (EE_2), respectively.[4]

X_3 and X_4, or student activity participation, senior (SA_3) and sophomore (SA_2) years, respectively. Each variable is a summative index, based on the number of "Yes" responses to a fifteen item matrix where the respondent was asked to indicate with a check whether he did or did not participate in each of the fifteen activities during that particular school year. The matrix was completed as part of the sophomore and as part of the senior year surveys.

X_5, or level of educational expectation, freshman year (EE_1). The measurement scale and procedure for X_5 is similar to that for X_2.

X_6, or parental educational stress (PES). This is a summative index based on a five-level, parent-specific measure of the amount of stress the respondent reported as a freshman his parents placed upon his continuing his education beyond high school.[5]

X_7, or parental achievement socialization practices (PASP). This is a summative index combining freshman-year responses to four parental socialization practices previously established as sources of variation in achievement, particularly in level of educational expectation.[6]

X_8 and X_9, or measured intelligence (IQ) and socio-economic status (SES), respectively.[7]

Bi-and-multi-variate correlation and regression (path) analyses are used to examine the two basic propositions of the paper; namely, the determinants of participation and the consequences of participation, net of the determinants. For the path analysis, diagrammatically depicted in Figure 1, the ultimate

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Figure 1 about here
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dependent variable is X_1, the educational attainment of the respondent some six to nine months subsequent to scheduled commencement. Temporally antecedent to X_1 is X_2, the respondent's level of educational expectation expressed during the final two months of his senior year. Preceding X_2 are X_3, X_4, and X_5, i.e., the number of student activities in which the adolescent participated during his senior and sophomore years, respectively, and his 'early' or freshman year level of educational expectation. These five variables, X_1 - X_5, constitute the endogenous or dependent variable set, i.e., those in whose explanation we are interested.[8] Comprising the exogenous or independent variables, that is,

those whose explanation we take for granted, at least for the analysis in question, are X_6 - X_9, i.e., parental educational stress, parental achievement socialization practices, measured intelligence, and socio-economic status. The inter-correlations of these nine variables are displayed in Table 1.

Table 1 about here

The system into which we have cast these nine variables is one which is assumed to be linear, recursive (asymmetric causal flow), and additive (absence of statistical interactions or conditional relationships). For such a basic model, the path coefficient, p_{ij}, is a partial regression coefficient in standardized form (Duncan, 1966; Land, Heise, and Duncan, in Borgatta, 1969; Boyle, 1970). As such, the path coefficient represents the proportion of a standard deviation by which a dependent variable changes when a given antecedent variable changes by one full standard deviation -- the influences of the other antecedent variables held constant. This effect is referred to as the direct effect, that is, the influence on the dependent variable of that antecedent variable net of the associated influences of the other antecedent variables. The total or gross effect of a given antecedent on a given dependent variable, that is, its effect when the associated influences of the other variables have not been removed, is indicated by the zero-order correlation coefficient, r_{ij}. The difference between the total and the direct effect, i.e., r_{ij} minus p_{ij}, is termed the indirect effect and is a measure of the portion of the total effect of the particular antecedent variable on the dependent variable which is attributable

to the associated influences of the other antecedent variables.

RESULTS

Some Determinants of Participation

Analysis of the determinants of participation can be divided into three segments: (1) by sex of respondent, (2) by year of participation, and (3) a comparison of patterns for both sexes and years.

Reference to Table 2 and the appropriate zero-order and multiple correlation

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Table 2 about here

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and path coefficients suggests that, for males, some eight percent of the variance in sophomore participation is accounted for by the five antecedent variables (R^2 = .083) with the most potent total and direct determinant of sophomore participation being freshman expectation level. Some 72 percent of the effect of "early" expectations on sophomore participation is direct, i.e., p_{45} = .18, r_{45} = .25. Ranking second as a source of variation in sophomore participation is parental achievement socialization practices the direct effect of which is some 70 percent of its total effect (p_{47} = .14, r_{47} = .20). The third and final significant direct determinant of sophomore participation is status. For status, however, the path p_{49} = .06, represents but 43 percent of the total participation -- status relationship of r_{49} =.14, indicating that a major portion of the relationship is indirect, resulting from the association of status with the other determinants of participation. Of the total indirect effect, some 20 percent is attributable to the linkage of participation with status through freshman expectation level. Finally, while sophomore participation is minimally associated with both I.Q. (r_{48} = .11) and PES (r_{46} = .13), their

respective insignificant paths suggest that neither of these variables directly influence sophomore participation.

For females the pattern of determination of sophomore participation is quite different from that for the males. While the five antecedents account for about the same percentage of variance for females (R^2 = .094) as for males, the only common determinant is that of status for which the respective total and direct effects are quite comparable, males and females. However, unlike the males where the primary total and direct source of variation was freshman expectations, this variable, while having a total effect of .18 on female sophomore participation has virtually no direct effect (p_{45} = .01). Similarly, whereas for males, parental achievement socialization practices was associated with participation both totally and directly, for females its total effect (r_{47} = .10) is minimal and its direct effect (p_{47} = .01) is virtually non-existent. And -- the two variables which exert a major total and direct influence on sophomore participation for females, i.e., PES with an r of .25 and a p of .20; I.Q. with an r of .22 and a p of .16, are the very same variables which, for males, had but minor total and almost non-existent direct effects.

Shifting from sophomore to senior year participation, we observe that for males the major determinant is sophomore participation -- indicating a tendency for participation in student activities to persist over time. In part, such persistence contributes to the increase in variance explained with an R^2 now of .337. As with participation in the sophomore year, freshman expectation level is an important determinant of participation in the senior year with a total effect of .34 and a direct effect of .15. Somewhat curiously, I.Q., which had but a minor total and no direct effect on sophomore participation now exerts a moderate total (r_{38} = .22) and a significant direct (p_{38} = .11) effect on senior participation. As with sophomore participation, parental achievement

socialization practices continues to influence participation, although contrary to a slight increase in its total effect from an r_{47} of .20 to an r_{37} of .24, its direct effect drops from a p_{47} of .14 to a p_{37} of .09. And, parental educational stress, which had no direct effect on sophomore participation now exhibits a slight direct effect of .04 on senior participation. Finally, status, while retaining its total effect of c. .14 - .15 no longer contributes directly to participation in the senior year (p_{39} = .01) as it did in the sophomore year (p_{49} = .06).

As it did for sophomore participation, the pattern of determination for senior participation differs for females from that for males -- although that difference is somewhat less for senior than for sophomore activities. As was true for the males, variance explained has increased with the R^2 now equal to .251. And, in common with the males is the fact that in the senior year female participation depends first on participation in the sophomore year (r_{34} = .46, p_{34} = .40), and second, upon freshman expectation level (r_{35} = .27, p_{35} = .15). Noteworthy, of course, is the fact that in contrast with the absence of a direct effect in the sophomore year, freshman expectations now ranks second in its direct influence on female participation in the senior year.

Measured intelligence persists both as a total and as a direct determinant of female participation with an r_{38} of .23 and a p_{38} of .07. However, whereas both the total and the direct effect of I.Q. on participation for males increased substantially senior versus sophomore year, for females the total effect remains virtually constant while the direct effect is reduced by almost half.

Finally, senior year participation for females is not directly affected by parental achievement socialization practices, parental educational stress, or by status, only the last of which had no direct effect on senior year participa-

tion for males. In summary, then, we infer that:

1. For both males and females, the largest single determinant of participation in student activities for the last year of high school is participation in the second year of high school. Students who participate early on tend to participate later on, a not unanticipated datum.
2. For both sexes, the second most critical determinant of participation in the last year of high school is the educational expectation level held in the first year of high school. And, while this is true for the sophomore participation of males, curiously, it is not true for that of females.
3. Only for males does parental achievement socialization have any "sizeable" total and direct effect on participation.
4. Measured intelligence is a direct determinant of participation for both sexes during the senior year and for females only during the sophomore year.
5. The relationship of participation to socio-economic status is: (a) weak as a total effect measured by the correlation coefficient for both years and sexes, (b) minor as a significant direct effect during the sophomore year, and (c) all but non-existent as a direct effect during the senior year.

Some Educational Consequences of Participation

The educational consequences we consider here are level of educational expectation at the end of the senior year (X_2), and actual educational attainment some six to nine months following completion of high school (X_1).

Of primary interest is whether either of these two consequences is dependent upon participation, sophomore or senior year, independent or net of the influence of the four exogenous and one endogenous variables just examined as plausible determinants of participation itself.

Reference to Table 2 reveals that not only does participation have a total effect on X_1, educational attainment, with correlations in the range of .21 to .36 and a multiple R of .64 for males and .67 for females, but so too do all of the other system variables. Thus, by way of example, for females, the correlation of X_1 with SES is .25, with IQ = .42, with PASP = .25, with PES = .30, and with EE_1 = .45. Similarly, Table 2 shows that senior year expectation level correlates, for males, .29 with SES, .46 with I.Q., .18 with PASP, .24 with PES, and .57 with EE_1. Multiple correlations of senior expectations are, for males, .65 and for females, .56.

To ascertain the effect of X_4, sophomore participation, and X_3, senior participation on X_1, and X_2, respectively, net of the associated influences of the other system variables, we refer again to the path coefficients in Table 2.

For males and for females, the direct effect of sophomore participation on either senior expectations or subsequent attainment is negligible, albeit that statistical significance is approached for male senior expectations with a path p_{24} of .04.

Senior year participation, however, does contribute directly both to senior educational expectations and to subsequent attainment. Sex differences, not surprisingly, exist. For males, the direct influence of senior participation on subsequent attainment is greater than is its direct influence on senior expectation level, i.e., p_{13} = .15 vis a vis p_{23} = .09; whereas for females just the reverse is true, i.e., p_{13} = .11 and p_{23} = .16. Noteworthy is the rank

order of senior participation among the determinants of senior expectation and subsequent attainment levels: as a direct determinant of senior expectations, for males, senior participation ranks fourth among the seven variables and third for females while as a direct determinant of subsequent attainment, senior participation for males ranks third (above SES but below IQ) and for females shares with freshman expectation level the rank of third above SES but below IQ.

Summarizing, then, this second and final section of data presentation, we submit that participation in student activities by males and females, at least during their senior year in high school, does, in point of fact, exert an independent incremental effect both on level of educational expectations and upon level of subsequent educational behavior.

DISCUSSION

We began this paper by reasoning, along with Polk, that participation in extracurricular activities is a form of "success" or "achievement" behavior and, as such, shares with other constructs in that domain some of the relatively well established antecedents of achievement. Furthermore, we reasoned that participation, in and of itself, may provide socialization experiences conducive to further achievement in such academically relevant spheres as levels of educational expectation and subsequent educational attainment.

To a meaningful degree, each of these propositions has received empirical support from the population studied. We must, however, qualify this inference with respect to the antecedents of participation and register cognizance of some important sex differences.

For males, we must qualify our general proposition regarding antecedents by noting that, by and large, parental educational stress bears little direct relationship to participation either during the sophomore or senior years and

that socio-economic status exerts its influence directly only during the sophomore year and, at that, but to a slight degree. Thus, while status cannot be dismissed entirely as a source of variation in participation, inasmuch as it does exert some influence on that variable indirectly, even our total effect measures, that is, the zero-order correlations of .12 and .15, provide scant support in the seventies for Hollingshead's generalization from the forties that:

> Participation or non-participation is associated very strongly with class position. . . . Adolescents from the higher classes are in far more activities than those from the lower classes. . . (1949: 201).

A third qualification of our original generalization regarding the determinants of participation concerns the role of measured intelligence. Earlier we noted that for males I.Q. exerts a direct influence only on senior participation and that its total effect doubled from an r of .11 in the sophomore to an r of .22 in the senior year. Given the modal correlation of c, .60 between grades and I.Q. (see, for example, Coleman, 1961: 261), the emergence of intelligence as a significant direct determinant of participation in the senior year may be reflective of a "sorting out" process, that is, the reduction in or elimination from participation of those males unable to maintain minimally acceptable grade-point averages.[9]

Most consistent with our thinking, of course, are the relationships between participation and parental achievement socialization practices and "early" or freshman year educational expectations. Apparently, as we reasoned earlier, participation for males does depend directly on the achievement child-rearing practices in the home. And, the relatively strong and persistent effect of freshman expectation level on participation tends to lend added substance to the observation of Cicourel and Kitsuse (1963: 146) that:

> The differentiation of college-going and non-college going students defines the standards of performance by which they are evaluated by the school personnel and by which students are urged to evaluate themselves. It is the college-going student more than his non-college going peer who is continually reminded by his teachers, counselor, parents, and peers of the decisive importance of academic achievement to the realization of his ambitions and who becomes progressively committed to this singular standard of self evaluation.

Turning now to the females, we have observed previously that participation in student activities for girls depends, to a degree, upon variables different from those which serve as sources of variation for boys. Only socio-economic status functions "identically" for males and females: a slight but significant direct effect on sophomore but not on senior participation. Measured intelligence, which for males doubled its total effect from sophomore to senior year and served as a direct determinant only in the senior year, for females remains almost constant as a total effect but diminishes some 44 percent as a direct effect over that same time period. One interpretation of this sex difference, congruent with the literature on sex and grades (see Lavin, 1965), and predicated upon our assumption that, to a degree, I.Q. acts as a surrogate for grades, is that the earlier social maturation of girls results in a correspondingly earlier "sorting out" process, i.e., a matching of grades and participation sooner in the life cycle of the secondary school.

Early or freshman educational expectations, which, for boys, is a major and direct determinant of participation in both sophomore and senior years, is only so for girls in the senior year. This finding, coupled with the higher correlation of participation and expectations for boys than for girls, may be indicative of the greater and the earlier saliency of career plans for boys

than for girls, a saliency which also renders early expectations for a more potent force in influencing later academic behavior for boys than for girls. As Douvan and Adelson concluded in their study of adolescents, "boys reveal a consistent preoccupation with choosing and preparing for a future vocational role" (1966: 26), while, for girls, there is a greater "vagueness" of career plans, a vagueness which emerges in their being "less definite about their aspirations" and"less realistic than boys in their plans for job preparation", including greater "ambiguities and inconsistencies in their educational plans" (1966: 36-37).

Finally, the lower correlations of participation sophomore or senior year with parental achievement socialization practices and the lack of any direct effects for females vis a vis males leads us to infer that participation per se carries a different meaning for girls than it does for boys. For boys, we have little reservation with our interpretation of participation as an instrumental achievement activity. For girls, we are inclined to temper this interpretation by suggesting that participation has a more expressive, personal connotation. As Kerckhoff has recently written:

> As they get older, the school as a socialization agency takes on different meaning for both boys and girls. The basic cultural expectation that the boy will become a full-time participant in the labor force, together with the close relationship between educational attainment and occupational placement, gives academic performance a much more instrumental meaning for boys than for girls. . . . As youngsters enter adolescence, therefore, boys are more likely to be concerned about achievement and girls to be concerned about their personal characteristics and how well they are accepted by others. In fact, the favorableness of the self-

> image of adolescent girls seems much more dependent on their image of their personal qualities than the boy's self-image, which depends more upon intellectual qualities (1972: 101).

In conclusion, we elect to focus on what may well be the more pivotal finding of this study: namely, the persistence of a relationship between educational attainment subsequent to the completion of high school and participation in extracurricular activities during the senior year -- after the influences of other key determinants of attainment have been removed. Although the direct effect of participation on attainment is not overpowering, it is, nevertheless, both significant and somewhat substantial. Taken together with the virtually non-existent relationship of participation to status of origin, the net association of participation with educational attainment, a critical determinant of ultimate status of destination, may indeed imply that student activities are in point of fact contributing to one of the goals of American secondary education: the career achievements of its students.

Figure 1

Provisional Temporal Ordering of the System Variables

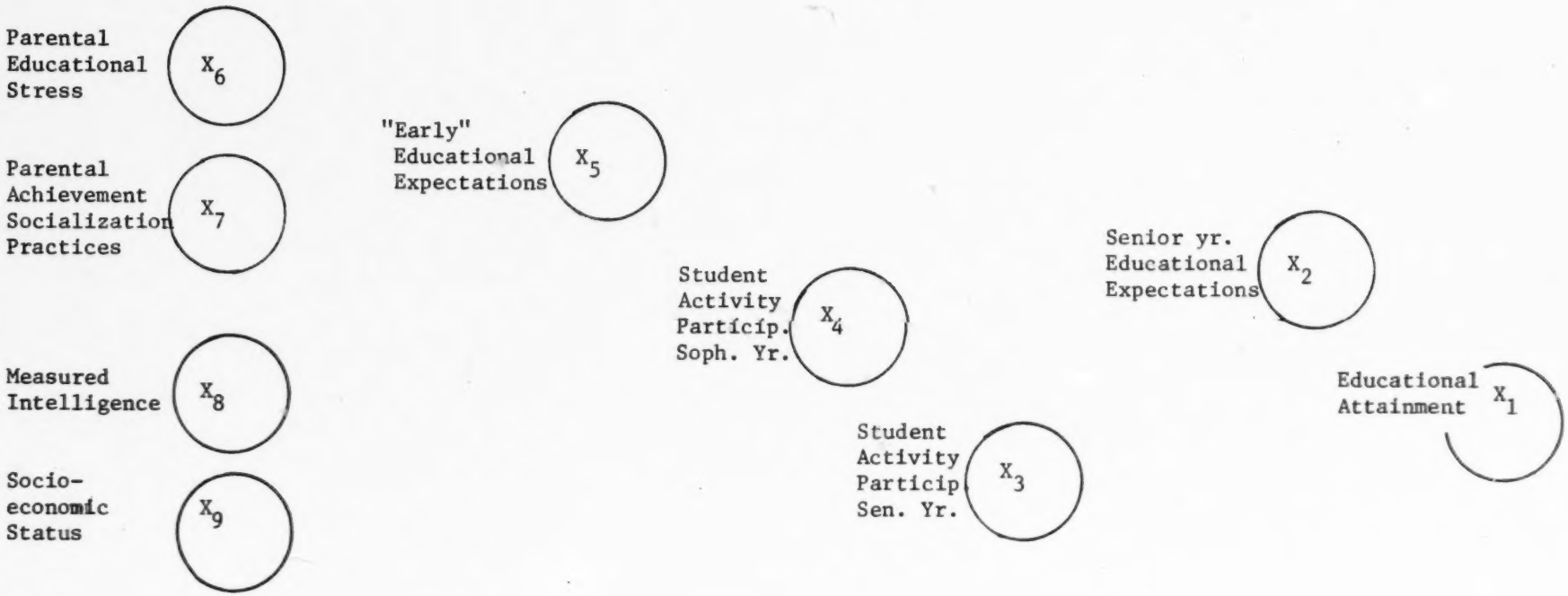

Table 1

Zero-order Correlation Coefficients for System Variables

(Males above diagonal, females below
with decimals omitted)

Variable: Number	Name	Correlation Coefficients 1	2	3	4	5	6	7	8	9
1	Educational Attainment		55	36	21	45	20	23	46	28
2	Educ. Exp. (sen. yr.)	61		33	23	57	24	18	46	29
3	Stud. Actvs. (sen. yr.)	33	31		52	34	19	24	22	15
4	Stud. Actvs. (soph. yr.)	22	19	46		25	13	20	11	14
5	Educ. Exps. (fresh. yr.)	45	48	27	18		37	25	37	34
6	Par. Educ. Stress	30	29	22	25	46		30	15	14
7	Par. Ach. Soc. Pract.	25	24	13	10	26	31		07	15
8	Measured Intelligence	42	39	23	22	40	22	19		12
9	Socio-economic status	25	22	12	14	26	18	08	20	

Table 2

Partial Regression Coefficients in Standardized Form and Zero-order and Multiple Correlation Coefficients

Variables: X_1 - X_9, (decimals omitted)

Independent Variables		Dependent Variables: 5 EE_1 P_{5j}	r_{5j}	4 SA_2 P_{4j}	r_{4j}	3 SA_3 P_{3j}	r_{3j}	2 EE_2 P_{2j}	r_{2j}	1 EE_3 P_{1j}	r_{1j}
MALES:											
9 Socio-economic status	(SES)	25**	34	06*	14	01	15	11**	29	09**	28
8 Measured intelligence	(IQ)	30**	37	02	11	11**	22	27**	46	24**	46
7 Par. Ach. Soc. Pract.	(PASP)	12**	25	14**	20	09**	24	02	18	09**	23
6 Par. Educ. Stress	(PES)	25**	37	01	13	04*	19	01	24	01	20
5 Educ. Exp. (fresh. yr.)	(EE1)			18**	25	15**	34	39**	57	10**	45
4 Stud. Actvs. (soph. yr.)	(SA2)					45**	52	04*	23	03	21
3 Stud. Actvs. (sen. yr.)	(SA3)							09**	33	15**	36
2 Educ. Exp. (sen. yr.)	(EE2)									30**	55
Multiple Correlation Coefficient:		56		29		58		65		64	
FEMALES:											
9 Socio-economic status	(SES)	13**	26	07*	14	01	12	07**	22	07**	25
8 Measured intelligence	(IQ)	28**	40	16**	22	07**	23	20**	39	15**	42
7 Par. Ach. Soc. Pract.	(PASP)	09**	26	01	10	03	13	09**	24	06**	25
6 Par. Educ. Stress	(PES)	34**	46	20**	25	03	22	03	29	03*	30
5 Educ. Exp. (fresh. yr.)	(EE1)			01	18	15**	27	30**	48	11**	45
4 Stud. Actvs. (soph. yr.)	(SA2)					40**	46	01	19	02	22
3 Stud. Actvs. (sen. yr.)	(SA3)							16**	31	11**	33
2 Educ. Exp. (sen. yr.)	(EE2)									42**	61
Multiple Correlation Coefficient:		57		31		50		56		67	

*Path coefficient equals or exceeds one standard error.
**Path coefficient equals or exceeds two standard errors.

SUBSTANTIVE FOOTNOTES

1. The research reported herein was supported by an initial grant from the State University of New York Research Foundation (40-220-A), a subsequent grant from the National Science Foundation (GS-1950), and a current grant from the National Institute of Mental Health (MH 1925-02).

2. Participation, as Barker, et. al., have shown, is also known to vary with certain contextual or ecological characteristics, such as size of student body. For purposes of this paper, however, those variables are beyond the scope of inquiry. (see Barker, et. al., 1962)

3. See, for example, the accounts published in The New York Times, September 21, 22, and 26.

4. Post high school educational behavior was measured via a mail survey questionnaire to which 88 percent of the original freshmen panel responded. Senior year educational expectation was measured with a seven-level, fixed alternative response to the question: "CONSIDERING your abilities, grades, financial resources, etc., how far do you actually EXPECT TO go in school?".

5. The parent-specific items were: "During the last few years or so, has your father /mother/ wanted you to continue your education beyond high school, that is, to go to a trade or business school, to college, etc?". Five fixed-response alternatives ranged from "Yes, he /she/ has stressed it a lot," to "No, he /she/ would rather that I did not go beyond high school."

6. Components of this index include (a) degree of participation in family decision making, (b) frequency with which each parent explains rules or provides reasons for decisions, and (c) frequency with which each parent praises the adolescent for tasks well done.

7. Measured intelligence scores are from the Otis and California Mental Maturity tests administered in most of the participating schools during the early part of the ninth grade. Socio-economic status is measured with the Hollingshead (1957) Two Factor Index of Social Position based on a weighted combination of scores assigned to the occupation and education of the major breadwinner.

8. Actually, for this paper, little attention will be accorded the explanation of differences in freshman or "early" expectations, even though it is an endogenous variable. Its explanation is peripheral to the central issues of the text.

9. We wish to thank our colleague, Bill Spady, of the Ontario Institute for Studies in Education, for suggesting this as an interpretation.

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